

Revision D  
3/29/10



***2010***  
***MODIFIED***  
***SERIES***

CAR CONSTRUCTION RULES



## 1. Bodies: (See attachment for exact specs.)

A. 1970 or newer American passenger car only, no panel vans or station wagons.

B. May utilize a Lexan full-windshield, with no wings, mounted to roll cage. Cars without windshields must have a minimum of 3 windshield bars in front of the driver. Cowl panel in front of the driver can be no wider than the cockpit and no farther back than the steering wheel. Must have front windshield and rear window support posts; painted roll bars will not constitute support posts.

B. Firewall and floorboards are mandatory. Minimum 0.125" aluminum, or 16ga or .060" steel, complete floor required.

C. Fiberglass or metal duplicates of body parts are permitted. Handmade body parts may be constructed of steel, aluminum, or fiberglass, but should be recognizable as a factory production vehicle. No carbon fiber. No plastic body parts. **Exception:** Howe part#'s 622 & 624 are the only approved plastic body parts.

D. All cars in competition must have a complete paint job, no reflective doors or quarter panels.

E. Body must be the same width, front and rear, and parallel to the OEM frame.

F. Original roofline of the vehicle must be maintained. No flat roofs. No wings or ground effects are allowed anywhere outside or inside the car.

G. A rear spoiler is allowed, non-adjustable by the driver can be no more than 6 inches high, measured from the deck to the top of spoiler along the plane of the spoiler. Rear spoiler shall be attached to the rear deck, and not exceed the width of the rear deck, or maximum 66" in width. Spoiler cannot extend more than 4 inches from the rear of the car, and control the flow over one surface only. I.E. no "Gurney" lips/flaps.

H. Sail panels must be the same on both sides of the car. Any reinforcing lips on the rear of sail panels must be at 180 degree bends.

I. All cars competing must be numbered with large legible numbers on both sides, on top and rear panel. Numbers on sides and top of car must be in contrasting color from body, each number being at least 4 inches wide and at least 24 inches high. Sponsor's names must not interfere with car numbers and must be neatly lettered.

J. Engine compartment will remain open, no side panels; hood sides may have a maximum 4-inch drop and must be enclosed at the rear of the hood. Engine must be enclosed from driver to protect from hot water, oil and fire. Maximum hood scoop height is 6 inches. Passenger side of body must be no further forward than the rear of the block. No panel in front of the right door to engine compartment.

K. Rear of the bodies must be solid panel at least 8 inches high and include the car number. No inner panels.

L. Both side windows must have at least a 12-inch opening (height and width), measured at the center of the window, between lowest point at top of window, whether roof or roll cage, and highest point at bottom of window, whether interior or body.

## 2. Frames:

A. Ground clearance: 4" frame, 3 ½" oil pan **with driver.** No part of race car can be lower than 4" from the ground (exception is front crossmember and oil pan.) Car must not scrape racing surface.

B. Factory production 1960 or newer perimeter American rear wheel drive passenger car frames only. No uni-body type front stubs. Front stub must have stock side rails, same make as stub. No sports cars, front wheel drive, Jeep, Bronco, etc. or 4-wheel drive frames allowed. No 2002 & up Ford Crown Vic or similar frames allowed.

C. Frames may be cut, in the rear only, at a point not further than 36 inches from the center of the rear end housing. No front clips or tube types are allowed. A maximum 4-inch wide X 4-inch tall frame stiffener may be welded directly to the outside of the frame rail.

D. Frames may not be widened or narrowed and must be able to support roll cage on both sides. Must be full and complete on both sides. Front cross member may be notched for radiator and/or steering clearance only. Frame horns may be modified/removed in front of steering box.

E. The minimum allowable wheelbase is 108 inches, both sides, maximum 112 inches.

F. Maximum overall width (front or rear) shall not exceed 81 inches from the outside to outside of tires.

### **3. Suspension and steering:**

A. Front suspension must be in stock OEM location, and must be replaceable by OEM stock parts.

B. Tie rod ends and adjustment sleeve may be replaced by a minimum 0.625" rod end and steel tube (heim joints allowed).

C. Weight jack must be in original centerline of the spring.

D. Stock passenger car spindles only, no fabricated spindles (Exception: Unaltered OEM replacement Pinto spindles with "IMCA" raised cast spindle allowed). Spindles can be ground for brake caliper clearance only. No welding, bending or fabrication of spindles allowed.

E. Bottom A-frames cannot be altered or moved (exception: can weld a shock mount and sway bar bracket/pad on the A-frame). Aftermarket ball-joints are allowed. No offset or bearing type lower control arm bushings are allowed. Tube-type upper A-frame is allowed and can be moved.

F. Front sway bar must be approved OEM type.

G. Suspension, steering and rear end parts must be of steel construction.

H. Steering box must be steel, approved OEM, and must remain within original bolt pattern for the type of frame used. No rack & pinion steering. Steering wheel and shaft may be modified to suit the driver's taste, but must be kept on the left side of the cockpit. No center steering is allowed. Quick release on steering wheel required – steering quickener and steering wheel may be aluminum.

I. Coil springs must be at least 4 ½ inches outside diameter. Steel non-progressive springs only.

J. No devices are allowed that would enable driver adjustment to alter wheelbase or for weight jacking while cars are in competition.

K. Only shocks allowed are one steel body, non-adjustable shock per wheel. No threaded body shocks, front or rear, or air type, or remote reservoir shocks. No Schrader valves of any type allowed. Only shocks that are cataloged at less than \$150 racers net are allowed. It is the responsibility of the Driver/Owner to prove the cataloged pricing upon request of Technical Official. Failure to provide the requested pricing will result in disqualification.

L. No covers on suspension parts are permitted, except clear cover shield or a shield to protect the shocks. This shield can cover no more than the front half of the shocks.

M. Rear Suspension: No independent rear suspension. All components must be steel. All trailing arms/link bars must be steel tubing. One mechanical traction bar, rubber bumpers allowed. Rear of the frame may be altered to accept leaf or coil springs, but not both; I.E. One spring per wheel. No torsion bars are allowed in the rear. IMCA coil-over kit allowed on rear only.

### **4. Engines:**

A. No aluminum blocks or oil pans.

B. Motor C.I. 410 Max.

C. No magnetos. No crank triggers.

D. Any American made V8 engines may be used as long as the rear of the engine (bell housing flange) is mounted at least 72 inches forward from the centerline of the rear axle. Engine offset must be kept within 2 inches of the centerline of the front cross member. Engine height minimum will be 11 inches from the ground to center of the crankshaft pulley bolt.

E. All engines used in competition must be able to be used in conventional passenger car without alterations. Motor mounts cannot be removed or altered. Castings and fittings must not be changed. No machine work on the outside of the engine or on the front or rear of the camshaft.

F. No 'total dry sump' systems are allowed. 'Wet' system must be operative. External one stage oil pump allowed. Oil coolers must not protrude above the interior. Accumulators cannot be mounted between driver and left-side door.

G. Cooling system may be modified. Radiator must be mounted in front of the engine and must have an overflow can.

H. One (1) naturally aspirated two or four barrel carburetor only. No fuel injection.

I. Any cast iron or aluminum cylinder heads permitted. GM heads must have a valve angle of no less than 23 degrees as measured from the crankshaft centerline. Ford 20 degrees and Mopar 18 degrees. (+/- 3 degrees). If aluminum heads are utilized, a weight penalty of 50lbs. that is placed forward of the flywheel will be enforced.

## **5. Exhaust:**

Exhaust system must be mounted in such a way as to direct spent gasses away from the cockpit of the vehicle and away from areas of possible fuel spillage. Mufflers are required and subject to track noise regulations.

## **6. Transmissions:**

A. Must have at least 1 forward and 1 reverse gear, plus a neutral position. With motor running and car in a still position, driver must be able to engage the car in gear and move forward, then backward. OEM production type, i.e. 3-speed, 4-speed, automatic, or "Falcon type" IMCA approved transmissions allowed. No 5-speed transmissions "in and out" boxes, or quick change devices are allowed. Functioning shift levers must be in OEM location on all OEM production type transmissions. All manual gear-type transmissions must have a standard OEM case and must have a working disc-type or approved cone-type clutch inside an explosion-proof bell housing. Automatic transmissions must remain in the OEM stock appearing automatic case. Can run steel bell-housings or SFI approved scatter shields or blanket. Scatter shield may be constructed of ¼ inch X 3-inch steel, 270 degrees, around the flex plate or flywheel. No Jerico, Rankin, Roltek or similar transmissions that utilize dog-ring technology are allowed.

B. No carbon or carbon fiber clutches. Minimum 5.5" diameter.

C. Minimum 2" diameter steel driveshaft and must be painted white. Steel slip-yokes only. A 360 degree drive shaft loop is required and must be constructed of at least ¼ in. by 2 in. steel, or 1 in. tubing, mounted 6 in. back from the front U-joint.

## **7. Rear end:**

A. Any approved OEM passenger car or truck type rear end may be used. Full floating hubs are recommended.

B. Quickchange rear ends allowed provided steel tubes and mounts are used.

C. No aluminum allowed, except for lowering blocks, axle cap, and drive flange. A 1-inch inspection hole in the center section is recommended.

D. Full spool, mini spool or welded rear-ends only. No Gold Trac, Detroit Locker or similar differentials allowed.

E. Only steel axles are allowed. No titanium axles or lower shafts are allowed.

F. No cambered rear ends are allowed.

G. No electronic or mechanical traction control devices are allowed.

## **8. Brakes:**

A. Brakes must be operating on all 4 wheels and must lock up all 4 wheels during inspection.

B. No brake shut-off or pressure sensitive devices are allowed.

C. Proportioning valves are allowed, but front to rear only.

D. Only vented rotors, front and rear. Rotors cannot be lightened. Rotors may be re-drilled for a different bolt pattern or for larger studs. No scalloped rotors.

E. Must be steel, approved OEM calipers, and they cannot be lightened.

F. No brake fluid recirculating systems allowed.

### **9. Tires and wheels:**

A. Must use USLMA mandated tire. No softening, soaking or altering of the compound of the tire in any way.

B. You must run the feature event with the tires you qualify on. Tires will be marked.

C. All wheels must be 8-inch steel racing wheels. No wide-five wheel adapters are allowed. Aluminum or steel spacers are allowed. May use bead-lock wheels. External steel bead-lock only.

D. Steel lug nuts required.

E. Bleeder valves are allowed.

### **10. Electronics:**

A. Only 1 battery is allowed and it must be securely mounted and shielded. Batteries must be located behind the driver and separated from the driver's compartment by the firewall. All vehicles must have the capability of starting without being pushed or pulled. All cars must join lineup on demand, unaided, or go to the rear of that race.

B. No electronic monitoring computer devices capable of storing or transmitting information except tachometers are allowed on cars. No digital gauges are allowed. No electronic traction control devices are allowed; I.E. electronic or otherwise. No adjustable ignition control boxes are allowed. Only 1 ignition box is allowed on the car. The only changes that can be made with ignition box are rev-limit settings, and only 1 high-end setting is allowed. The setting can be changed through 1 chip only, or an internal setting inside the box. No timing retard controls are allowed. No magnetos.

C. No ignition system equipment or wiring may be located within driver's reach except for starter/ignition switch. All ignition system equipment must be securely mounted, with an unobstructed view. All wires from ignition box/coil to distributor must be visible with NO open connections.

### **11. Fuel system:**

A. Racing fuel cells are required and must be mounted by at least 2 solid steel straps, 2 inches wide, .125 inch thick, or equivalent around the cell, securely attached to frame/cage.

B. Fuel cells must be enclosed in steel container and must be mounted securely behind the rear axle and between the rear tires, no lower than 6 inches off the ground, protected by roll cage tubing.

C. Protective tubing must cover the rear and extend past both sides of the fuel cell. Fuel cell must be a minimum of 4 inches ahead of the rear bumper and no part of the fuel cell shall be lower than the protective tubing.

D. A reinforcement plate of not less than 1/8 in. magnetic steel installed behind fuel cell is HIGHLY recommended.

E. Fuel cells must have check valves, and bladders are HIGHLY recommended.

F. Fuel cells are limited to 32-gallon maximum capacity. Fuel cells must be grounded.

G. Pick up must not be underneath fuel cell.

H. A limit of 1 standard fuel filter allowed between the fuel cell and the carburetor. No "cool cans".

I. Fuel: Gasoline, methanol, or alcohol allowed. No Nitrous Oxide will be allowed. No use of performance enhancing fuel additives of any kind.

J. No electric fuel pumps.

K. If fuel cell does not have aircraft style positive seal filler neck/cap system – a flapper, spring or ball type filler rollover valve is required.

L. Must have positive throttle stop on carburetor.

### **12. Roll Cages:**

A. Cage must consist of continuous hoops not less than 1.666-inch outside diameter and must have a wall thickness of at least .095-inch. Low carbon, mild steel tubing is recommended. Cage must be frame mounted in at least 6 places.

B. No brazing or soldering is allowed.

C. It must consist of a configuration of front and rear hoops, connected by tubing on sides or side hoops.

E. Driver's head must not protrude outside the cage with his/her helmet on and strapped in the driver's seat. It must have a minimum of one cross bar to top halo of roll cage. Roll cage must be securely supported and braced. Protection of the feet is mandatory, with bar across the back of engine, of vertical bars and rub rails, or similar protection.

F. No brace bars forward of the cage may be higher than the stock hood height. The main cage can be no further forward than the engine plate.

G. Door Bars: A minimum of 3 drivers side door bars are required, at least 1.5 inches OD must be as parallel with the ground as possible, and located perpendicular to the driver so as to provide maximum protection for driver, but without causing undue difficulty in getting into or out of the vehicle. The sidebars must be welded to the front and rear of the roll cage members.

H. The passenger side of the car must have at least one cross door bar, minimum 1.25 inches OD and either horizontal or angled.

I. Steel door plate, 18ga or .049 inch minimum thickness must be securely welded to outside of driver side door bars and cover area from top door bar to bottom door bar and from rear hoop down-post to 5 inches in front of driver seat.

### **13. Safety:**

A. Roll bar padding is required in driver compartment. Fire retardant padding is HIGHLY recommended.

B. SFI approved full fire suits of a flame retardant nature must be worn by all competitors. Fire retardant gloves and shoes are required. Two-layer fire suits SFI-5 or better, and Nomex underwear are recommended. Clothing must be in good condition, free from grease and other flammable liquids.

C. All drivers must wear full-face helmets, SA2000 or newer that are in good condition.

D. Hans, Hutchens or similar SFI approved neck restraint is required.

E. Full size (minimum 16 in. x 20 in.) driver side window net is required (no string or mesh type nets). Window net is to be mounted with a latch at top front of window.

F. Five point safety belts, sub belts, & shoulder harness required. The shoulder harness must be mounted securely to the roll cage. Recommended seat belts and shoulder harness should not be more than one year old.

G. Aluminum high back racing seats only. Seat must be mounted inside the frame rail and ahead of the rear tire with a minimum of six (6) 0.375 inch bolts. Bottom of seat can be no lower than the bottom of the frame rail. Full containment seats, with left and right head, shoulder and leg braces HIGHLY recommended.

H. A kill switch is required within easy reach of the driver. Switch must be clearly marked "OFF" and "ON".

I. All cars must be equipped with an on-board fire suppression system that is fully charged and accessible to the driver.

### **14. Bumpers:**

A. Center of top bumper bar, front and rear, must be 18-inches, plus or minus 2-inches from the ground.

B. Rear bumper covers are allowed but cannot have holes.

C. Steel bumpers must be used both front and rear.

D. 2-bar front bumpers must be mounted to the frame end-to-frame end, no wider than outside frame horns, with the bottom loop parallel to the ground. Top bar must be directly above the bottom

bar so bumper is perpendicular to the ground. Must be made of a minimum 1.25-inch tubing and must be able to support the car is lifted by a wrecker. Front bumper tubes 6.5 in. +/- 1 in. top to bottom.

E. Rear bumper, steel nerf bars and bodies must not extend beyond the width of the rear tires, and must not contain any sharp edges. Rear bumper will be no more than 2-inches wider than the body on each side.

F. Rear bumpers must be bent forward on the ends at a 90-degree angle no less than 10 inches, or in a complete loop back to the rear clip.

G. Nerf Bars: All cars are recommended to be equipped with approved side rail bars and scrub rails constructed of magnetic steel tubing. Bars must not extend past outside edge of tires.

### **15. Weight:**

A. Loose objects and/or weight must not be used in driver's compartment or outside of the body or hood area. Any weight added to other areas of the vehicles must be securely mounted and must be painted white and have the car number on it, and attached with at least 2 ½ inch bolts.

B. No carbon fiber, Kevlar, titanium products, parts or components are allowed anywhere on the racecar. No gun-drilled, tubular or hollow bolts or studs will be used anywhere on the car.

C. All cars must weigh a minimum of 2500 lbs. including the driver in the car at pre-tech.

D. Left side weight is 57% maximum with driver in car.

### **16. Mirrors/Communication:**

A. Rear view mirror with a maximum width of 26 inches will be permitted. No side mounted or "spot" mirrors allowed.

B. Two way communications radios are required. Positive communication must be maintained between the driver and a spotter crewman. Radios must be of two-way voice communication type only. Radios must be independent of the car's electrical system. Only one radio is permitted per car.

**The absence of a particular rule does not necessarily mean its approval!**

### **ASPHALT BODY DIAGRAM & DIMENSIONS**

(A) 20" Max. – 16" Min. (Ground to center of bumper front & rear)

(B) 6.5" Min. (Center to center)

(C) 52" Max. – 42"Min.

(D) 4" Max. Hood sides – 3" Max. Rake in hood.

(E) 42" Max. (Bumper & Nose)

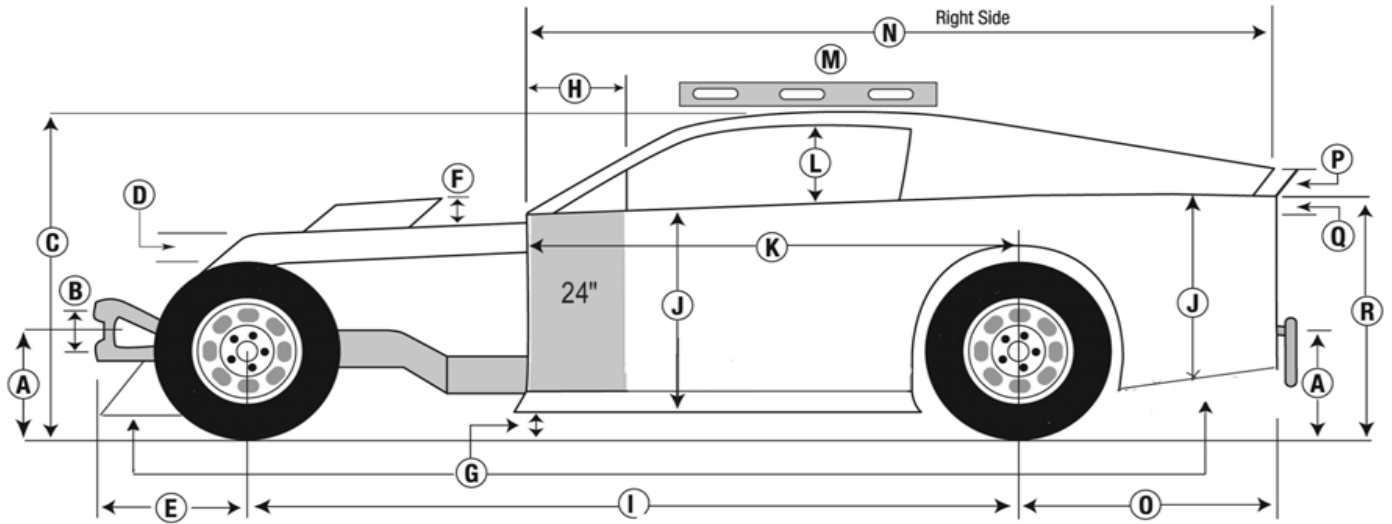
(F) 6" Max. (Scoop/Deflector)

(G) 4" Min. at Nose and Sides– 8" Min. at Quarters

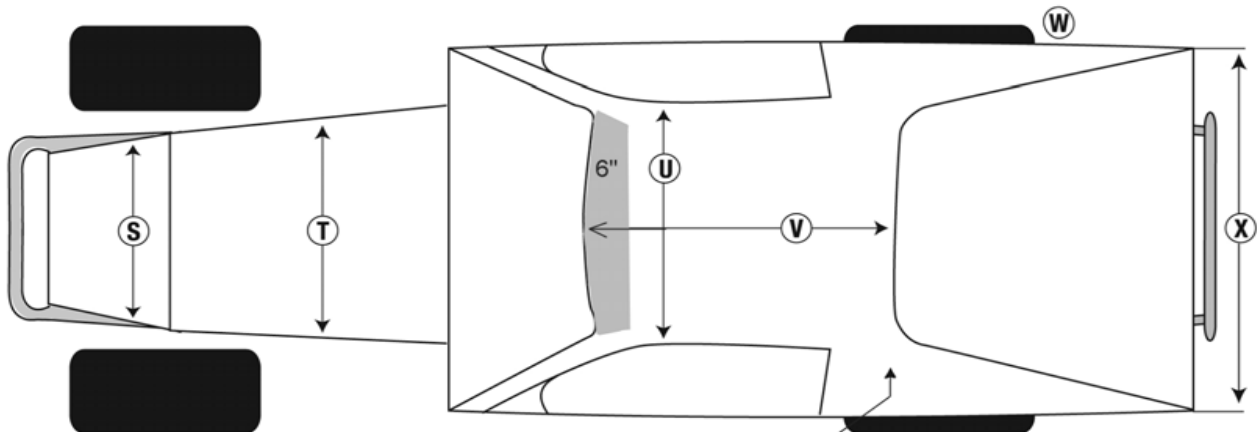
(H) 19" Max. (Same both sides)

(I) 112" Max. – 108" Min.

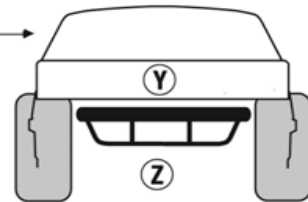
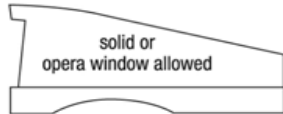
- (J) 29" Max. – 22" Min.
- (K) 72" Max. Or not past back of block, top of door on right side (8" max at bottom of door). Left side may extend forward to cover foot box if necessary.
- (L) 18" Max. – 12" Min. Opening, both sides.
- (M) With 4' level, must have 2" gradual clearance at rear and no more than 5" at front
- (N) 120" Max. – 106" Min.
- (O) 45" Max. – 34" Min.
- (P) 4" Max. height at rear of sail panel, gradual slope from roof to this point.
- (Q) Interior slope is **6" Maximum**. Front to rear and flat across. If flat at front half of interior you have used up 50% of your 6" so from behind the driver to the rear you only have 3" of slope. Top of interior must be flush with top of doors and quarter panels.
- (R) 38" Max. – 28" Min.
- (S) 39" Max. – 24" Min.
- (T) 66" Max. – 24" Min. No narrower than radiator
- (U) 52" Max. – 44" Min.
- (V) 56" Max. – 41" Min.
- (W) Tires must be the widest part of the car. Must be able to see side wall of tire from front, top, and rear.
- (X) 66" Max. – 53" Min.
- (Y) 8" Panel / 90 degrees to ground. Must be solid, attached to the deck and extend to the quarter panels, securely fastened.
- (Z) Tubular steel rear bumpers allowed, must have rounded nerf bars that follow quarter panel and connect back to frame on both sides.



**Shaded area reserved for Series and/or Track Sponsor Decals. MUST DISPLAY DECALS TO BE ELIGIBLE FOR FULL PURSE.**



**SAIL PANELS:** Must not be wider than the body and must attach to the quarters in a single stock appearing plane that angles inward to the roof. No fins or lips on sail panels, body, or nose.



# USLMA MODIFIED SPOILER SIDE DAM ILLUSTRATION

